Antimicrobial Resistance Country-Level Implementation Pilot in Zambia: Trip Report of a Follow-up Visit in August 2004

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Abstract

Drug resistant microbes now threaten successful treatment of many infectious diseases, including tuberculosis, malaria, sexually transmitted infections (STIs), diarrheal diseases, acute respiratory infections (ARIs) and acquired immunodeficiency syndrome (AIDS). As part of its Infectious Disease Initiative, U.S. Agency for International Development (USAID) has funded a partnership of Cooperating Agencies to develop an approach for identifying existing resources and priority AMR concerns and catalyzing an initial response by local stakeholders. The partnership is field testing the approach in Zambia where an Advocacy Working Group (AWG) has been formed to review evidence and make decisions about strategic options. A team of partnership members attended in Zambia a retreat held by the AWG to prepare a Call for Action based on the local drug resistance situation and plan a stakeholder meeting to increase awareness among stakeholders of the problem of drug resistance and possible solutions. This report summarizes the findings, activities, and recommendations of the team.

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Key Words and Terms

Antimicrobial resistance, drug resistance, AMR containment

CONTENTS

ACRONYMS

ACT	Artemesinin-based combination therapy
AEAZ	Adult Education Association of Zambia
AED	Academy for Educational Development
AIDS	Acquired immunodeficiency syndrome
AMR	Antimicrobial resistance
ARI	Acute respiratory infection
ART	Antiretroviral therapy
ARV	Antiretroviral
AWG	Advocacy Working Group
BBC	British Broadcasting Corporation
CBO	Community-based organization
CBoH	Central Board of Health
CDC	Centers for Disease Control and Prevention
CDL	Chest Diseases Laboratory
CHAZ	Christian Health Association of Zambia
CPE	Continuing professional education
CQ	Chloroquine
DFID	Department for International Development
DILSAT	District Integrated Logistics Self-assessment Tool
DTC	Drug and Therapeutics Committee
EDL	Essential Drugs List
EDP	Essential Drugs Project
FGD	Focus group discussion
GFATM	Global Fund to Fight AIDS, Tuberculosis, and Malaria
GNC	General Nursing Council
GP	General practitioner
GSL	General Sales List
HC	Health center
IMCI	Integrated Management of Childhood Illnesses
ITG	Integrated Treatment Guideline
JICA	Japan International Cooperation Agency
JHPIEGO	Johns Hopkins Program for International Education in Gynecology and Obstetrics
LUDHMT	Lusaka District Health Management Team
MCZ	Medical Council of Zambia
MDR	Multi-drug resistance
MoH	Ministry of Health
MSH	Management Sciences for Health
NDP	National Drugs Policy
NGO	Nongovernmental organization
NMCC	National Malaria Coordination Committee
OI	Opportunistic infections
P&PB	Pharmacy and Poisons Board

PCR	Polymerase chain reaction
PEPFAR	Presidential Emergency Plan for AIDS Relief
POM	Prescription-only medicine
PSZ	Pharmaceutical Society of Zambia
QA	Quality assurance
QAP	Quality assurance program
QC	Quality control
QN	Quinine
RFCC	Request for country clearance
RPM Plus	Rational Pharmaceutical Management Plus [MSH]
RPM Plus Program	Rational Pharmaceutical Management Plus Program
RTI	Respiratory tract infection
SOP	Standard operating procedure
SOW	Scope of work
SP	Sulfadoxine-pyrimethamine
STD	Sexually-transmitted disease
STG	Standard treatment guideline
STIs	Sexually transmitted infections
SWAP	Sector-wide Approach
TB	Tuberculosis
TDRC	Tropical Diseases Research Center
TZ	Times of Zambia
UNZA	University of Zambia
USAID	United States Agency for International Development
USG	United States Government
UTH	University Teaching Hospital
WHO	World Health Organization
ZANA	Zambia News Agency
ZDM	Zambia Daily Mail
ZIS	Zambia Information Services
ZNBC	Zambia Broadcasting Corporation
ZNFC	Zambian National Formulary Committee

BACKGROUND

Antimicrobial resistance (AMR) is a major global threat and needs urgent action. For this reason the U.S. Agency for International Development (USAID) is testing an approach to support initiation of country-level advocacy, coalition-building, and implementation of locally feasible packages of strategies to prevent and contain resistance. The approach is currently being pilot tested in Zambia.

As a first step in the process, a team visited Zambia in July 2003 to get an initial impression of the situation on the ground. The team found that there was a lot of interest and concern over the issue of AMR in the country, and many stakeholders were supporting and willing to contribute to efforts towards AMR containment.[1] A second team visited the country in March 2004 to actually initiate the process. During and immediately following the visit, some important achievements were made – holding of a stakeholders' meeting, formation of an AMR advocacy working group (AWG) endorsed by the Central Board of Health (CBoH), and initiation of a rapid appraisal survey to understand the existing situation about issues that impact on AMR.[2] The current visit was made with an objective to attend a retreat organized by the AWG and work with local partners to identify steps to further move the process forward.

Purpose of Trip

Maria Miralles, Deputy Director of Rational Pharmaceutical Management Plus (RPM Plus) Program, Nancy Pollock, Senior Project Office, Change Project/Academy for Educational Development (AED), and Mohan P. Joshi, Program Manager for AMR at RPM Plus/Management Sciences for Health (MSH), traveled to Lusaka, Zambia to provide technical assistance to further the implementation of the approach to build support for containing AMR. Ms. Pollock was in Lusaka from August 1 to 24, Dr. Joshi from August 17 to 24, and Ms. Miralles from August 18 to 24.

Scope of Work

The scope of work for the team:

- Work with Mr. Hazemba, Mr. Mudondo, and members of the AMR AWG to prepare for the retreat organized for August 20 and 21, 2004.

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[1] Joshi M., Pollock N., and Sommer M. 2003. *Exploratory Visit for the Antimicrobial Resistance Country-Level Implementation Pilot in Zambia, July 6–18, 2003: Trip Report.* Submitted to the U.S. Agency for International Development by the Rational Pharmaceutical Management Plus Program. Arlington, VA: Management Sciences for Health.

[2] Joshi M., Zimicki S., Sommer M. 2004. *Initiation of Antimicrobial Resistance Country-Level Implementation Pilot in Zambia, March 2–13, 2004: Trip Report.* Submitted to the U.S. Agency for International Development by the Rational Pharmaceutical Management Plus Program. Arlington, VA: Management Sciences for Health.

- Attend the retreat to observe the process and be available to address issues or questions that may arise.

- Assist in identifying the next steps in the advocacy process.

- Debrief the USAID Mission.

ACTIVITIES

Preparations for the AWG Retreat

In preparation for the retreat, the team worked with the AWG Secretariat, Mr. Oliver Hazemba and Mr. Caesar Mudondo, to reorganize and finalize the summary findings of the rapid appraisal carried out to identify the existing situation pertaining to issues impacting AMR. This summary of the data collected to date was distributed to the AWG members during the retreat and is included as Annex 1.

The team worked with Mr. Hazemba, Mr. Mudondo, and Prof. Chintu, the Chair of the AWG, to revise and finalize the agenda items for the retreat. The agenda is included as Annex 2.

In addition, the team assisted in preparing a set of guidance sheets on AMR trends, AMR surveillance, pharmaceutical management, and drug use behavior and communications to help the Chair facilitate discussion during the retreat.

The Retreat

Attendance

The AWG retreat was held on August 20 and 21 at the Protea Hotel outside of Lusaka. Activities began at 6:30 p.m. the first evening and ended with a luncheon the following day.

The retreat was managed by the AWG members; the U.S. team was there to observe the process and be available to answer questions regarding the process. Six of the 11 AWG members attended the retreat. Research and academia, AMR surveillance, drug management and treatment services in the public and private sector were represented. Those who attended were Prof. C. Chintu, Dr. J. Mwansa, Mr. O. Hazemba, Dr. J. Chisanga, Mr. C. Mudondo, and Ms. A. Zulu. Dr. P. Chanda came as an alternate for Dr. N. Sipilanyambe representing the National Malaria Control Committee (NMCC). Apologies were obtained from three members – Dr. D. V. C. Mtonga, Dr. F. Kasolo, and Ms. E. Mwape, representing the Central Board of Health, HIV surveillance, and the Pharmacy and Poisons Board. Dr. M. Macwan'gi, a social scientist, did not attend. Mr. Patrick Mwanza, the communication consultant who conducted the media survey, also participated. He provided expertise on communication issues and a non-technical perspective in terms of drug resistance.

Proceedings

Some of the major issues brought up and discussed during the meeting were:

- The review and adoption of the minutes of the previous retreat held on June 4 and 5, 2004, with minor modifications.

- Confirmation that Dr. Francis Kasolo of the Virology Laboratory at University Teaching Hospital (UTH) had accepted the invitation to join the AWG.

- The rationale for and sources of data collection for the situation analysis. Mr. Mudondo explained that the aim was not to conduct a comprehensive and in-depth assessment but to get a rapid appraisal based on stakeholder interviews and review of some of the existing documents.

- Briefing by the Chair on the rationale for the Call for Action document of what the AWG understands is the real and potential threat of AMR in Zambia, and what needs to be done about it. This Call for Action is planned to be a 2- or 3-page document that can be used to call the stakeholder meeting and will identify specific areas for immediate and future actions.

- Discussion (based on the summary findings of the rapid appraisal) on the existing problems and possible action points to be included in the Call for Action document. The major areas impacting on resistance that were discussed for inclusion in the Call for Action were prescribing and dispensing practices, treatment-seeking behavior of the public, drug quality, surveillance, and collection/management of information. For each of these areas, the group discussed causes for the existing problems and possible remedial actions.

- Presentation of the findings of a rapid assessment survey on media presence and communication channels in Zambia by the report's author, Patrick Mwanza. Mr. Mwanza explained that the aim of this survey was to guide the development of advocacy and communication strategies in order to optimally engage and utilize the media. The report of this survey appears as Annex 3.

Although preparing the first draft of the Call for Action and drawing up a tentative workplan (for follow-up activities with timelines) were on the meeting agenda, these tasks could not be accomplished due to lack of time. Before ending the meeting, the AWG members, however, agreed that a small drafting committee (Mr. Hazemba, Mr. Mudondo, and Mr. Mwanza) would prepare the first draft of the Call for Action and circulate to the rest of the members for comments/suggestions. The members also agreed that the AWG Secretariat would prepare a workplan for follow-up activities and send to other members for their comments.

Identifying the Next Steps in the Advocacy Process

Following the retreat, the team worked with Mr. Hazemba to—

- Come up with a skeleton for the Call for Action document

- Draw up a tentative workplan for follow-up activities leading up to the large stakeholder meeting

- Discuss changing needs for administrative and technical support and draft a scope of work (SOW) to support these needs. This preliminary draft of the SOW included: compile informational materials on AMR; identify potential partners and stakeholders to assist with adapting materials to the local context; assist with the design of the stakeholder meeting; draft press release; and maintain regular implementation diary. Based on the media survey he conducted and his contributions at the retreat, Mr. Patrick Mwanza was identified as a potentially suitable consultant for the task.

The team also met a local consultant, Mr. Peter Kelly, to learn more about his activities in Zambia. He was highly recommended as a management consultant who might be available to work with the AWG to move the process forward. After learning more about his interest and expertise, we discussed potential opportunities for providing training or technical assistance in team building, strategic planning, leadership development, resource mobilization or external evaluation of the approach.

Debriefing the USAID Mission

The team, along with Mr. Hazemba, debriefed the USAID Mission on the developments to date. Ms. Barbara Hughes, Director, Population Health and Nutrition (PHN); Ms. Jeannie Friedmann, Deputy Director, PHN; Dr. Abdi Mohamed, Senior Technical Advisor, Child Survival, Nutrition and Malaria; and Ms. Lisa Luchsinger, HIV/AIDS Senior Advisor, were present during the briefing.

Ms. Pollock briefly introduced the project as some of the USAID staff were unfamiliar with the project and then debriefed everyone on the current trip. Dr. Joshi debriefed on the technical aspects of the project. One of the things the team brought up with the Mission was how to best sensitize donors and whether a donor workshop would be appropriate. Ms. Hughes emphasized that Zambia was using the SWAP (sector-wide approach) mechanism where pooled money goes through the CBoH. She advised that the most effective strategy would be to ensure that the CBoH coordinates the donor meetings. In order for AMR activities to be supported with donor funds, the government needs to put AMR activities in their action plan.

Dr. Mohamed brought up the point that the current activity is primarily Lusaka-based and we need to think about how to move into districts. The team mentioned that Nancy had met with Peter Kelly to explore if he might work with the group to help move the process forward. Dr. Mohamed expressed that he thought Mr. Kelly was very effective and it would be a good idea to pursue the possibility of this type of support through Mr. Kelly.

Collaborators and Partners

- During the previous two visits (July 2003 and March 2004) as well as during the current visit, the MSH Regional Technical Advisor, Mr. Oliver Hazemba, supported the team as the key local counterpart. He oversaw the whole process before and during the retreat and provided valuable advice to the team on the appropriate next steps and what is relevant and

suitable in the local Zambian context. The team feels that continued input of Mr. Hazemba will be critical to the success of the project.

- The AWG, chaired by Prof. Chintu, is key to the success of the project. The team met Prof. Chintu at his office at UTH on August 19 and discussed generally about the overall aspects of the project and specifically about the retreat. The team also met with other members of the AWG during the retreat. The team feels that continued motivation of the AWG members is crucially important.

- Another potential collaborator who could be highly contributory to the advocacy process is Mr. Patrick Mwanza. The team heard from him the report on the rapid assessment on media presence and communication channels in Zambia and had opportunity to interact with him during the retreat. He is a potentially suitable person to act as a consultant to move the advocacy process forward and assist the AWG in staging the large stakeholder meeting. Because Mr. Mwanza is not an expert in the field of AMR, he will need to rely on the expertise of and decisions made by the AWG. The team thinks such an arrangement will minimize the risks of disempowering the AWG and diminishing their contributory role.

- Peter Kelly is another potential collaborator. The team feels the experience and expertise of his group could be utilized to support the program, especially in planning and managing the process and in providing leadership training to the AWG members for advocacy activities.

NEXT STEPS

Immediate Follow-up Activities

- Assist the secretariat and the AWG in finalizing the Call for Action document. (The draft Call for Action has undergone first revision by the AWG members. The draft is included as Annex 4).

- Coordinate with Mr. Hazemba to assist the AWG in planning the large stakeholder meeting. Important actions needed:
  - Setting objectives for the meeting
  - Determining the date and venue of the meeting
  - Identifying the list of stakeholders to be invited to the meeting
  - Preparing the agenda for the meeting
  - Estimating the budget required to meet the meeting cost, secretarial services, consultancy services, and media publicity
  - Gathering relevant AMR-related materials to be distributed to the participants
  - Contracting consultant services to help the AWG move the process forward

Recommendations

- Reduce the workload on the AWG by hiring a consultant to oversee planning for the stakeholder meetings activities, including the preparation of press releases.

- Support the collection of informational materials and the identification of local stakeholders who could be involved in local adaptation of them.

- Strengthen AWG capacity to move the advocacy process forward through team building and leadership development activities.

- Support the AWG to develop a coherent advocacy strategy to help ensure a successful stakeholder meeting and sustain momentum after stakeholder meeting.

- Use the lessons learned from the Zambia experience to revise the approach for application in a second country in 2005.

- Suggest (based on limited representation at the retreat) that the AWG members assign alternates to attend meetings when they cannot. This will maintain the group's broad representation and also have the added benefit of engaging a wider group of persons in these activities.

ANNEX 1. SUMMARY FINDINGS OF THE RAPID APPRAISAL SURVEY BASED ON STAKEHOLDER INTERVIEWS AND REVIEW OF EXISTING DOCUMENTS

AMR Levels and Trends

Condition	AMR levels/treatment failure	Location	Population	Year of publication	Authors
Enterobacteria from AIDS patients	*Nontyphoidal salmonellae* (resistance to treatment 6-92%) *Shigella flexneri* (6-100%) *S. dysenteriae* (0-100%) (breakdown of drugs attached)	Lusaka	124 adults, 105 children	2002	Mwansa, J., Mutela, K., Zulu, I. et al. Emerging Infectious Diseases 8.1 (2002): 92-93
Malaria	Clinical failure (CQ): 31-48% Clinical failure (SP): 3-17%	6 sites	300 febrile children < 5	1998	Barat, L. M., Himonga, B. et al. (CDC) Tropical Medicine & International Health 3.7 (July 1998): 535-42
Malaria	Clinical failure: (SP): 0 Clinical failure (CQ): 25%	Lundazi District Hospital	169 children <5 with slide-confirmed uncomplicated malaria	1999	Williams, H. A., Kachur, S., et al. (CDC, Tropical Disease Research Centre, Zambia) Tropical Medicine & International Health Vol. 4(10) October 1999
Malaria	CQ resistance: 58% SP resistance: 26%	Kaoma District	70 patients with uncomplicated falciparum malaria. SP given to those patients who had received CQ prior to enrollment	2000	H. M. Bijl et al. (Kaoma (District Hospital, Zambia, Dept. of Internal Medicine, Groningen University Hospital, The Netherlands) Tropical Medicine & International Health 5.10 (October 2000): 692-95
Streptococcus pneumonia	Overall resistance: 34.1% Tetracycline: 23.0% Penicillin: 14.3% Sulfamethoxazole + trimethoprim: 12.7% Chloramphenicol: 3.9%	Zambia	260 children under 6	1997	Woolfson, A., Huebner, R. et al. (University of Oxford) Bull World Health Organ 75.5 (1997): 453-62.

Surveillance Capacity

Reference Laboratories: Antimicrobial Resistance Surveillance
Information provided during interviews with laboratory staff (UTH Bacteriology Lab information missing)

Organism tested for resistance	Reference laboratory	Is reference laboratory doing primary isolation of the organism	# Labs submitting isolates for specific organism (list labs on a separate form)	# Isolates processed per year by the reference lab	Laboratory method used for testing resistance (for each organism)	Are all isolates received tested or is a sample of isolates tested?
Mycobacterium tuberculosis (TB)	Chest Diseases Laboratory *(TDRC Microbiology Lab—in process of being set up)*	Yes		1560 (2003)	Proportional method	All
Plasmodium falciparum (malaria)	TDRC Malaria	Yes	Mpongwe Isoka Mansa Chipata Macha Chongwe Sesheke	100	PCR	All
Neisseria gonorrhoeae (STD)	TDRC Microbioloby Lab	Yes		> 500 (ongoing project)	E-test	All
Streptococcus pneumonia	TDRC Microbiology	Yes		> 200 (ongoing project)	E-test	All
Haemophilus influenzae	TDRC Microbiology	Not currently funded		Was done on a previous project	Disk method	All
HIV	UTH Virology	Yes			Genetic analysis 310 tissue culture PCR	
	TDRC	Yes		Sub-typing done	PCR	Some
Other (e.g., shigella spp., vibrio cholerae)		Yes		> 200 (per projects or outbreaks)	E-test	All

Surveillance Capacity

Microbiology Laboratories: Diagnostic Testing and Use of Reference Laboratories (Information provided during interviews with laboratory staff)

Organism tested for resistance	Laboratory	Is laboratory doing primary isolation of the organism	# Isolates processed per year	Diagnostics	Laboratory method used for testing resistance (for each organism)	Are all isolates received tested or is a sample of isolates tested?
Mycobacterium tuberculosis (TB)	Company Clinic, Kitwe	Yes				
	Company Clinic, Kitwe	Yes (diagnosis)				
	Multi Medical	No (8 sent to CDL)		2N		Yes
	Corpmed	No (sent to CDL)				
	CFB	AFB (2N) (36 sent to CDL in 2003)				Samples
Plasmodium falciparum (Malaria)	Company Clinic, Kitwe	Yes (diagnosis)	> 250			
	Corpmed	No		QBC parasite		
	CFB	Yes		QBC		
Neisseria gonorrhoeae (STD)	Company Clinic, Kitwe	Yes	~100		Gram + culture	
	Corpmed			Gram stain		
	CFB	Yes (diagnosis)				
Streptococcus pneumonia HIV	Company Clinic, Kitwe		~200		Gram + culture	
	Company Clinic, Kitwe	Yes (diagnosis)	< 200			
	Multi Medical	Yes (10 sent to UTH Virology)			Abbott Determine Hexagon HIV 142	Yes
	CFB	UTH			Abbott Hexagon	All
Shigella spp; E. coli; staph; strep	Corpmed				Culture and sensitivity	
E. coli; staph	CFB					

Surveillance Capacity

Background

Data obtained through AMR surveillance is used for decision making at various levels; within institutions (e.g., UTH) and at the national level for policy decisions and development of evidence-based treatment guidelines. The malaria treatment policy, TB guidelines and STI and ART protocols were influenced by available surveillance data. The cholera treatment policy has since the early 90s been influenced by such data. Several drug resistance stakeholders interviewed reported on the need for more geographically representative data

UTH-Microbiology, UTH-Virology, and TDRC are WHO regional reference centers. Data on the number of health facilities with functioning laboratories in the country is not available. It is however estimated that only about 33% of health facilities in Zambia have the capacity to carry out microscopy. There are 5 reference laboratories in Zambia—UTH Microbiology Laboratory, UTH Virology Laboratory, NMCC, TDRC, and Chest Diseases Laboratory (CDL). NMCC and CDL specialize in malaria and TB, respectively. All these are involved in surveillance activities. NMCC and TDRC have set up sentinel sites (10 sites for malaria) at which most of the surveillance activities are undertaken. Mining companies on the Copperbelt have good laboratory infrastructure with the capacity to do surveillance work. Other facilities like mission hospitals, defense forces hospitals, and private hospitals have laboratories which may have surveillance capacity.

Findings from Surveillance Capacity Interviews

Information was obtained through interviewing key informants and review of documents. The sample of laboratories (located in Lusaka, Kitwe, and Ndola) interviewed included five national-level reference laboratories and three private laboratories. The sample is not necessarily representative. Private laboratories were interviewed to assess their interest in and capacity to participate in surveillance activities.

Guidelines

Four out of five reference labs and one private lab know of guidelines regarding the recommended level of microbiology laboratory services for the different levels of hospitals

Laboratory Quality Assurance

No awareness of a national medical laboratory quality assessment scheme among private laboratories interviewed. The reference laboratories reported various use of a national laboratory QA scheme at a variety of levels of a laboratory (national, institutional, provincial). One laboratory reported, however, that there was no networking among the laboratories in terms of QA. One out of three private laboratories interviewed reported participating in EQC through CDC. UTH participated in regional QC, and TDRC, CDL, and UTH Virology reference laboratories participated in international QC programs.

Funding Sources

The private sector laboratories interviewed rely on patient subscriptions for support and are not aware of donor support of surveillance activities. Government, WHO, JICA, USAID, CDC, DFID, and the Global Fund were identified as donors supporting AMR surveillance activities. Two laboratories noted the diseases/program specific nature of surveillance funding. Two laboratories reported that all types of funding were difficult to obtain. Technical training (3 labs) and information management (2 labs) were mentioned as difficult areas to obtain donor support.

Four out of the five reference laboratories interviewed reported increasing interest in supporting surveillance activities as well as new donor involvement (Gates Foundation for TB surveillance and global initiatives for malaria surveillance). Availability of new drugs and changing treatment protocol were mentioned as reasons for increased interest.

Role of the Private Sector in AMR Activities

The role of private laboratories in drug resistance surveillance activities was seen as primarily diagnostic by reference laboratories, although one respondent felt they could be contributing much more than they currently are. Two respondents mentioned that AMR surveillance in the private sector consisted primarily of susceptibility testing and the private labs differ from public laboratories in levels of supervision and standards. Some of the private laboratories interviewed were interested in participating in surveillance activities and felt they had human and infrastructure resources to contribute. However, they currently had no relationship with the public sector laboratories nor access to SOPs and other materials provided by the public sector. More private sector laboratories would need to be assessed in order to fully understand the potential role they could play in AMR surveillance.

Use of Data

Respondents were asked how data collected are being disseminated and used. Diagnostic information is used by clinicians and disseminated through results forms. Data used for surveillance and policy is used by primarily the government (MOH and CboH) and disseminated through reports and workshops. The questions used did not pick up any information on the role of DTCs in information management, use and dissemination.

All respondents (except one private laboratory who was not collecting surveillance data) reported they were collecting data that are not being used. The main reasons cited were lack of coordination between laboratory staff and clinicians (3 labs). Other reasons mentioned included lack of funding for dissemination and that data are used for research or specific projects and not disseminated further.

Training

All respondents, except one from the private sector, received some training in the past 2 years. When asked what type of training would be most welcomed, four of six respondents mentioned information management/computer training.

Information Needs and Information Dissemination

When asked about information they needed but were not getting, five out of eight laboratories said they needed general information on drug resistance. Specialized information needs included information on the molecular basis of resistance, atypical mycobacteria, and the mechanisms

Primary mechanisms mentioned for dissemination of information among colleagues were meetings and workshops (5), leaflets and circulars (4), and email/Internet (3). Print media, policy makers, and leaflets were most frequently mentioned for dissemination of information to the public.

Data Management

Limited data management capacity was a recurring theme. Data management capacity was mentioned as a reason for affecting data quality and as a barrier to data utilization. Respondents listed data management as an area that was difficult to find funding for and an area where training would be welcome.

All the reference laboratories had computer access. All were using Epi Info for data management, with one lab also using WHONET software. None of the private laboratories had computer access.

Pharmaceutical Management

Treatment Seeking/Drug Use

Findings	Population	Methodology	Authors
• Most treatment begins at home although the majority of cases also seen in the formal health system • Most children did not receive appropriate care (in this case 3 day course of CQ because of lack of access and lack of understanding of the importance of taking the full course • **Treatment failures** seldom received the 2nd line treatment of SP	Zambia	154 detailed illness narratives	Baume, C. et al., 2000 Social Science and Medicine. 51.10 (2000): 1491-503
• Preferred private facilities to public health facilities (GP, chemists, street vendors, and market stalls) • Peer consultation was the predominant referral mechanism reported by students • Main barriers associated with government health centers and hospitals: shortage of drugs, lack of privacy, long queues, examinations conducted by staff of the opposite sex, high medical fees, and demanding the attendance of the partner before provision of treatment	Lusaka	20 structured interviews; 10 FGD and 4 STD illness case simulations at private pharmacies	Msiska, R. et al., 1997 Health Policy and Planning 12.3 (1997): 248-52

Prescribing

Findings	Population	Methodology	Authors
20% decrease in drugs used was observed in the intervention centers after the intervention; as a consequence, fewer drugs were out of stock at the end of the month	16 health centers in Lusaka	5,685 patient cards analyzed before, during, and after the interventions; over 4 months, prescribers attended 1 to 3 2-day seminars addressing STG for common conditions in primary care	Bexell, A. et al., 1996 J. Clin. Epidemiol. Vol.49, No.3333, pp. 335-357, 1996
Does blood slide microscopy in peripheral HC improve malaria diagnosis over clinical diagnosis? - Antimalaria drugs were prescribed with equal frequency to those who were referred for a blood slide (56%) and those not referred (58%) 35% patients without parasitemia were prescribed antimalarials - Diagnosis by microscopy was generally accurate, it had little impact on the treatment of persons with fever	6 health centers	Record review and staff interviews, review of blood slides	Barat et al., 1999 American Journal of Tropical Medicine & Hygiene 60.6 (Jun 1999): 1024-30
- Main reason for self-medicating was lack of money (37%); also expressed dissatisfaction with availability of drugs and waiting time 37% of those who self-medicated went to the HC as the second course of action, 51% did nothing	Lusaka	Community-based survey, hospital outpatient survey, and urban health center survey	Atkinson, S., Ngwengwe, A., Macwan'gi, M., et al., 1999 Social Science and Medicine 49 (1999): 27-38
- Urban: 60% of patients had self-medicated prior to clinic visit - Rural: 50% of patients had self-medicated prior to clinic visit	Zambia providers (urban and rural sites)	interviews	Faxelid, E. et al, 1998 East African Medical Journal 75.4 (April 1998): 232-6

Drug Supply (Information listed is from a review of the literature—local reports have been collected but have not been reviewed)

Findings	Population	Methodology	Authors
Simulations revealed the amount of drug sold depended on the amount of money the client had	Lusaka	20 unstructured interviews, 10 FGD and 4 STD illness case simulations at private pharmacies	Msiska, R., et al., 1997 Health Policy and Planning 12.3 (1997): 248-52
Drug costs in addition to user fees were a barrier to treatment	Rural (Chiawa, Kafue District) Urban (George compound, Lusaka)	FGD, 57 men, 44 women aged 14-68	Ndulo, et al., 2000 Sexually Transmitted Diseases 27.9 (2000): 496-503
Main problems reported: not enough STD drugs (67%0), not able to perform necessary tests (58%), not enough staff (43%)	2 health centers in Lusaka	Interviews gaining provider perspectives	Faxelid, E., Ahlberg, B. M., et al., 1997 Int. J. Nurs. Stud. 34.5 (1997): 353-57
• Main reason for self-medicating was lack of money (37%); also expressed dissatisfaction with availability of drugs and waiting time • Main reason for going to outpatient departments at UTH rather than health center was because **drugs were cheaper** (drugs dispensed at the hospital vs. getting prescription which required drug purchase)	Lusaka	Community-based survey, hospital outpatient survey, and urban health center survey	Atkinson, S., Ngwengwe, A., Macwan'gi, M. et al., 1999 Social Science and Medicine 49 (1999): 27-38
Expensive medications were seen as more efficacious, but participants could only afford inexpensive medications	Lundazi Districtrap	Rapid ethnographic assessment using FGD for community assessments, 36 in-depth interviews with parents, drug vendors, parents of children under 5,	Williams, H. A., Kachur, S. P., Nalwamba, N., et al., 1999 Tropical Medicine & International Health Vol. 4(10) October 1999

Policy and legal framework		
National Drug Policy	The National Drug Policy was adopted by the government in 1999.	CBoH-EDP NDP
	Antibiotic policy: There is no national antibiotic policy. The use of antibiotics is restricted by statute (Therapeutic Substances Act and Pharmacy and Poisons Act) to POM. The Pharmacy and Poisons Board is responsible for enforcing the laws. There is no "reserve list" of antibiotics in Zambia.	
	Prescribing restrictions: Antibiotics can only legally be prescribed by medical practitioners and dental surgeons registered with the MCZ, veterinary surgeons, and other categories of practitioners authorized by the Act. A new law aims at authorizing a limited range of medicines to be prescribed by nurses. Clinical officers in the public sector may prescribe drugs authorized for the level of care at which they practice. Veterinary antibiotics are regulated under the same laws.	P&PB MCZ
	Drug promotion: The promotion of medicines, including antibiotics is guided by the Standards of Pharmaceutical Practice in Zambia.	
	Enforcement capacity: Data is not available on the implementation or impact of these laws/regulations. It is however an accepted fact that generally the capacity for effective regulation of medicines and pharmacy practice is lacking in Zambia for various reasons. This is the reason the pharmacy and medicines regulations are currently being reviewed and new legislation is expected to be enacted soon.	Standards of Pharmaceutical Practice
	Product registration: All medicines intended for the Zambian market are required to be registered by the Pharmacy and Poisons Board. Medicines, except General Sale List (GSL) medicines in their original packs, may only legally be sold in pharmacies registered by the Pharmacy and Poisons Board. The number of antimicrobials registered is not available.	
	Regulation of pharmaceutical personnel: Pharmaceutical personnel are registered by the Medical Council of Zambia. These include pharmacists and pharmacy technicians.	Medical and Allied Professions Act

Area of practice	Findings	Sources of data
Selection and procurement of antimicrobial agents		
Treatment guidelines	**Existence:** Different guidelines (copies available) exist. STGs and Integrated Treatment Guidelines for Frontline Health Workers (ITG) are for all common diseases in Zambia while there are also disease-specific guidelines (malaria treatment guidelines, guidelines for ART, guidelines for TB management). **Development and revision**: All are developed by consensus of experts and key opinion leaders in the various conditions covered in the guidelines and approved by the ZNFC. There is no set period for revision but the ZNFC aims at revision every 3-4 years. Some programs (e.g., Family Health Trust) have developed guidelines (syndromic management of STIs) for specific programs. **Guidelines for different levels of care:** Guidelines stipulate care to be provided at different levels.	1. CBoH (Pharmacy Unit-ZNFC secretariat) 2. STG 3. ITG 4. Guidelines for the Diagnosis and Management of Malaria 5. IMCI Guidelines 6. Infection Prevention Guidelines 7. TB Manual 8. ART–A Reference Manual 9. Management of OIs–A Reference Manual
	Availability and adherence to STGs: There is no data available on the availability of STGs nationally. One study assessed the availability of ITGs in the screening rooms of selected health facilities in Lusaka (LUDHMT) and found that about 50% of the facilities had ITGs in the screening room CBoH is in process of establishing a drug management system (DILSAT) which will incorporate collection of such data. Drug and Therapeutic Committees at facility level are responsible for promoting health workers adhering to recommended treatment protocols.	CBoH-Essential Drug Program Literature search Report of survey during training for DTC, April 2001

Area of practice	Findings	Sources of data
Essential Drug List	**Existence:** An Essential Drug List (EDL) exists with 200-300 drugs. The new STGs include an EDL and Essential Laboratory Supplies. EDL includes antimicrobials. **Selection process:** EDLs are selected on the basis of the treatments recommended. They consist of largely first-line drugs, with some second-line drugs. The ZNFC is responsible for selection. **Revision:** There is no set period of revision but the ZNFC aims to revise the list every 3-4 years. The last revision (2003) was done after 4 years.	EDL and STG EDL, STG and CBoH-Essential Drug Programme EDL, CBoH-EDP
	Listing according to levels of care: Antimicrobials, and other drugs are listed according to levels of care at which there is expected to be competence to administer the drugs. **Availability:** There is no data on the availability of EDLs in health facilities. CBoH is in the process of establishing a system which will incorporate collection of such data. **Availability of drugs on EDL in facilities:** No data exists for the country-wide situation. A survey on drug availability in 12 sites in Lusaka UDHMT found 70% of facilities had certain selected tracer drugs. Same survey indicated an average stock out rate of 16% of the tracer drugs.	EDL Literature search Literature search Drug supply and use review in Lusaka urban district; 2002, Hazemba Oliver

Education, training, and capacity building		
In-service training/CPE	Statutory professional registration bodies (Medical Council of Zambia, General Nursing Council) require professionals to earn CPE points to retain their registered status. MCZ does not conduct CPE activities but GNC does organize some CPE/in-service training activities. Professional bodies like the Faculty of GPs, PSZ are more active in organizing CPE activities. Topics for CPE programs vary and include some AMR-related topics. There is no data available on topics (from PSZ and MCZ) covered by MCZ registered professionals in CPE. There is no data available on the impact of such activities. Opportunities exist for including AMR topics in CPE programs for nurses and pharmacists. There is no data available on the appropriateness of dispensing and prescribing. CBoH through DILSAT has incorporated collection of such data.	MCZ PSZ GNC
	There is no training provided to health workers on the use of STGs but training has been provided by the TB, HIV/AIDS, and malaria programs on the use of the disease-specific guidelines. The training is for all categories of health workers.	UNZA School of Medicine (Dept of Pharmacy) General Nursing Council (GNC)
	Quality Assurance Program (QAP) within the CBoH provides training and technical support to QA in DHMTs and health centers. Directorate of Monitoring and Evaluation provides training and oversight. CBoH monitors quality by quarterly performance audits, supervision visits by DHMTs and HMIS. The new HMIS was piloted in 15 districts and is being established nationwide. CBH developed a manual of standards for 6 priority health areas: RH and FP, HIV/AIDS and STDs, child health and nutrition, TB, water, and sanitation; 85 QA teams operate in 95% of the districts.	(Marquez, L. and (Madubuike, C.)
Pre-service training	Curricula for nurses, pharmacy, and biomedical sciences were reviewed. Only the nursing curriculum (3 categories of nurses) had specific AMR topics outlined. The other curricula did not specifically list out AMR-related topics. The review did not include any of the syllabi, which could have AMR-related topics in detail. There is no data to demonstrate that what is taught as per curriculum is practiced. AMR topics may be included in the biomedical sciences, nursing and pharmacy curricula without going through the normal, long bureaucratic process according to the respective heads of the training institutions.	Curricula for nursing, pharmacy and biomedical sciences GNC, UNZA (SOM)

	The pre-service curricula for nurses and pharmacy students do not include treatment guidelines. Curricula for medical students and clinical officers were not obtained.	UNZA School of Medicine (Dept. of Pharmacy) General Nursing Council (GNC)
	Of the curricula for institutions training health workers which have been reviewed, only the nurses' curriculum includes the EDL.	Curricula for pharmacy, nurses and biomedical sciences
Public education campaigns	There have been many campaigns organized promoting the correct use of medicines, including antibiotics. Many messages in such campaigns focus on antimicrobial use. The P&PB and PSZ jointly organized one such campaign in 2000-2001. NMCC, as part of the Roll Back Malaria activities participates in the annual SADC (November) and Africa Malaria (April) Days. Appropriate use of antimalarial drugs is one of the aspects promoted during these events. Such campaigns include promotion of infection prevention strategies such as use of ITNs. NMCC is planning for an intensive awareness campaign (starting September) as part of the plan for rolling out the treatment policy.	P&PB report on the Public Awareness Campaign. 2001 NMCC
Capacity building	**Infection prevention committee:** Some hospitals, in the public sector, have infection prevention committees. No data is available on how many such committees exist in the country. No data is available on how many such committees are in the private sector CBoH, with funding from JPHIEGO, is in the process of providing orientation to health workers on infection prevention. **Infection prevention guidelines:** Guidelines have been developed and health facilities are being trained on how to implement the guidelines. **Drug &therapeutic committees:** All public sector facilities are expected to have a functional Drug and Therapeutic Committee. However, not all do. No data is available on how many do and do not. No data is also available on what the D&TC's, where they exist have done about AMR containment D&TC's are supposed to report to the ZNFC.	 JPHIEGO, UTH Microbiology Lab CBoH-EDP

Quality		
Quality assurance mechanisms	In the private sector, there is no standard, laid down mechanism. Some companies have developed in-house mechanisms. No data was collected from the private sector on this aspect.	CboH, literature search
	A number of private sector importers and manufacturers have QC facilities in which drug quality may be tested.	
	The EDL is not strictly applied for procurement in the private sector although it has some effect since it influences public sector demand.	
	In the private sector, procurement is also influenced by product licensing requirements. Only licensed products may be marketed in Zambia. In the public sector, procurement of antimicrobials is largely based on EDL. The National Drug Policy stipulates that procurements must be based on EDL.	
	In the public sector, pre-qualification of suppliers is applied for some products. There is no public drug QC laboratory for routine testing of drugs for the public sector.	
	Product licensing requirements are quite effectively enforced although no data exists to determine compliance.	Pharmacy and Poisons Board (P&PB)
	No data exists on the proportion of antimicrobials found to be sub-standard or counterfeit.	P&PB

Potential non-health sector partners

- Adult Education Association of Zambia (AEAZ) conducted a national education campaign to inform voters of their rights and obligations and encourage voting in national elections. The outreach and advocacy was successful in encouraging citizens to vote, lobby, and hold political representatives accountable for their actions. Challenges included lack of reliable transportation, lack of funds, and the need to campaign in several languages in the rural areas where English was not spoken. (Chakanika WW and Chuma PC)

Information needs and communication channels

- All stakeholders interviewed noted a need for more information on drug resistance. The need for general information as well as more specialized information such as the need for more

geographically representative information, the need for information on a wider variety of pathogens, and technical/procedural materials for laboratory technicians. Private sector particularly felt left out on the dissemination of information.

- Stakeholders suggested information flyers, booklets, e-mail, seminars, drama, electronic media, circulars, newsletters as possible channels for the dissemination of information to professionals and the public.

- Editors interviewed suggested the following channels for dissemination of health information—

  o Channels: Radio, newspapers, television, and word of mouth are ways through which the public learn of such health topics as the new medicines for malaria, medical treatment for pneumonia, and HIV/AIDS treatment.

  o Reach: The editors suggested church-based organizations be involved in disseminating information on health issues due to their remarkable outreach capabilities to access non-traditional audiences in suburbs and villages.

  o Credibility: The print media in general is said to be the most credible not only on health/medicine issues but other issues as well due to its durability and referral advantage.

  o Impact: Television has the most impact to both the government decision-makers and the business community because they 'like seeing themselves on television'. While television has limited reach it can have great impact. For example, the government closed Soweto market after the television crew showed pictures of the deplorable sanitary conditions at the market, and the business community blamed the media.

Stakeholder perceptions regarding antimicrobial drug resistance

- All 8 laboratories interviewed reported that drug resistance requires urgent attention; 7 felt drug resistance was already a big problem and 1 felt it was a potential problem.

- All the editors interviewed were concerned about drug resistance and were very receptive to being involved in the dissemination of information on drug resistance and offered suggestions for facilitating this type of effort (see media summary).

- All cooperating partners viewed AMR as serious. Some stakeholders felt drug resistance issues did not concern them and suggested the interviewer speak to someone else.

- Consequences recognized by most, but not all thought it was an urgent problem.

- Use of the term 'antimicrobial resistance' may have been interpreted as 'antibiotic resistance' by some stakeholders and may have impacted responses of those who were not familiar with

the term. While all the editors interviewed were familiar with the term 'drug resistance', none were comfortable with the use of 'antimicrobial resistance'.

- Many respondents have been sensitized to the issue of drug resistance through malaria resistance—all the editors associated drug resistance with malaria.

- Not all stakeholders linked drug resistance to their work, even though it involved drug resistance dimensions. Some stakeholders were very interested in learning how drug resistance applied to their work. The interview process was used to educate respondents; some who were initially unaware of how resistance could impact their work became very interested and asked to be involved in the implementation process. Many stakeholders, including private sector are interested in participating in implementation.

- Misuse of drugs, bad prescribing and dispensing practices, poor patient compliance, and shortages of drugs were some of the reasons given for drug resistance.

ANNEX 2. AGENDA FOR AMR ADVOCACY WORKING GROUP (AWG) RETREAT, HOTEL PROTEA, LUSAKA

August 20 and 21, 2004

1. Welcome /apologies

2. Review minutes of the last meeting and address outstanding issues

3. Review the objectives of the current meeting

    - In preparation for the upcoming Stakeholders' and Donors' Meetings

        o Drafting a Call for Action document of what the AWG understands is the real and potential threat of AMR (for malaria, TB, HIV/AIDS, and others) in Zambia and what needs to be done about it. This Call for Action will be used to call the donor and stakeholder meetings and will identify specific areas for immediate and future actions. The Call for Action is a document the AWG should review periodically.

        o Preparing work plan (activities and timeline)

4. Presentation on data collection

5. Analysis of findings

6. Draft the "call for action" document

7. Prepare work plan

ANNEX 3. REPORT ON MEDIA PRESENCE AND COMMUNICATION CHANNELS IN ZAMBIA

By Patrick D. Mwanza, August 2004

1.0   Background

Drug-resistance is a global problem. It occurs when infections develop resistance to the drug used to disable them—it becomes a problem when alternate drugs are not available or not affordable to treat infections. Drug use is the key driver of drug resistance (also called antimicrobial resistance or AMR). Misuse of drugs through overuse, under-use, and unnecessary use accelerates the development of resistance. Drug resistance is complicating the treatment of major infectious diseases such as pneumonia, gonorrhea, cholera and dysentery, malaria, tuberculosis, and AIDS and undermining disease control efforts.

Drug resistance is not new, but there is a new urgency for containing it. Lifesaving drugs to treat malaria, tuberculosis, and AIDS that are increasingly available through global initiatives such as the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) and the Presidential Emergency Plan (PEP), are at risk for losing effectiveness due to drug resistance.

Drug resistance is a complex problem encompassing several dimensions—pharmaceutical management and drug supply, drug use behaviors, drug resistance information and surveillance capacity, and stakeholder interest and support around drug resistance. Containing drug resistance requires strengthening within and coordination across these dimensions. Although many existing activities target these different dimensions, a lack of coordination makes it difficult to achieve the critical mass of activity required to contain resistance.

For example, providing treatment guidelines and supporting training in their use will not change prescribing practices if the appropriate drugs are not available. Similarly, changing drug treatment policy and ensuring the supply of the appropriate treatment may not result in appropriate treatment if prescribers do not have access to the new treatment guidelines.

Drug resistance terminology

Antimicrobials: Antimicrobials are medicines that specifically kill or inhibit the growth of disease causing and other microbes (including bacteria, parasites, viruses, and fungi). They include antibiotics, antimalarials, antituberculosis drugs, and antiretrovirals**.**

Antimicrobial resistance: Antimicrobial resistance is the ability of a microbe to withstand the killing or disabling effect of an antimicrobial. In this report, the terms 'drug resistance' and 'antimicrobial resistance' are used interchangeably.

1.1   Global efforts to raise awareness on drug-resistance

As part of its Infectious Disease Initiative, the United States Agency for International development (USAID) is supporting efforts to raise awareness of the problem of drug resistance and to develop interventions to improve drug use practices and drug quality. A key first step was supporting the development of the World Health Organization (WHO) Global Strategy for Containment of Antimicrobial Resistance, a document that represents global consensus on interventions, research gaps, and appropriate approaches for containing drug resistance.

At the country level, USAID has funded a partnership of cooperating agencies (AED/CHANGE Project, Association for the Prudent Use of Antibiotics, Harvard Drug Policy Group, BU/ARCH Project, and the RPM Plus Project at Management Sciences for Health) to develop an approach for identifying existing resources and priority AMR concerns and catalyzing an initial response by local stakeholders. A key component of the approach is increasing awareness of and support for addressing the problem of drug resistance.

2.0   Purpose of the Rapid Assessment Survey

The approach is currently being implemented in Zambia. The purpose of conducting a rapid assessment survey on the media presence and communication channels in Zambia was to guide the development of advocacy and communication strategies in order to optimally engage and fully utilize the media by—

- Identifying appropriate communication channels for information dissemination

- Understanding the role of the media in delivering health information in Zambia and the information needs of the media in order to disseminate information

2.1   Methodology

The survey covered six media houses in Lusaka—National Mirror, The Post, Times of Zambia, (TZ), The Farmer Magazine, Zambia Daily Mail (ZDM), and Zambia Broadcasting Corporation (ZNBC). The survey covered both print (newspapers and magazines) and electronic (radio and television) media. Ten media personnel, mainly at the editor level, were interviewed. Information was collected over a period of four days using an interview guideline instrument.

2.2   Data analysis

The data (qualitative) that was generated from the personal interviews through the use of an interview guideline as well as observation tools was manually analyzed. This meant a careful examination of information in order to identify common responses to the key themes.

2.3   Limitation

Because of time limitation in which the survey was to be conducted, only four newspaper houses, one magazine, one radio and television station were covered. However, the views expressed by the ten media personnel from the media houses covered were representative.

2.4   Media profile

Table 1. Media Houses Covered During the Survey

Media	Ownership	Audience	Coverage
Times of Zambia	State	General public	National
Zambia Daily Mail	State	General public	National
The Post	Private	General public	National
National Mirror	Churches Council of Zambia and Zambia Episcopal Conference	General public (Christian bias)	Mainly Lusaka, copperbelt, and southern provinces
The Zambian Farmer	The Zambia National Farmers' Union	Commercial and small-scale farmers	National
Zambia National Broadcasting Corporation	State	General public	National radio and television station

3.0   Findings

3.1   Coverage of health stories

The media houses surveyed publish or broadcast health stories either as straight news, features, or documentaries. Publication or broadcasting of health stories is like any other story, based on newsworthiness. Basically, editors decide on the stories to be published or broadcast. However, TZ, ZDM, and The Post have health columns in which health stories are published on the designated days per week. There is also 'air time' on radio and television during which health matters are discussed. None of the media houses surveyed have a deliberate policy to cover health stories.

"Because of other reasons, health stories are covered on an ad hoc basis. In other words, coverage of health stories is event driven because there is no deliberate policy to cover health stories. Such stories are covered as and when they happen based on the universal determinants of news. The paper is not proactive but reactive in its coverage of health stories," said ZDM.

The editors assign reporters. This is part of planning of what is to be covered in the paper and it happens during the morning editorial meetings. However, as part of initiative, reporters have the leeway to cover other stories while in the field. The only condition is that such stories should meet the editorial policy of their respective media houses.

"As a rule, the news editors assign journalists on what type of news to be covered depending on their diary ideas. However, reporters are encouraged to write stories on any other topic including

health. 'Side stories' receive equal chances of being published or broadcast for as long as such stories conform to the editorial policy of the media house," said *National Mirror*.

None of the media houses surveyed has a health editor specifically to handle health stories. The news editors who are the ultimate decision makers pass all stories and they distinguish a 'health' story from a 'news' story. Inadequate resources were a common response when asked why these media houses have no health editors. However, one could hear the unspoken words to the effect that 'it is not necessary at the moment'.

3.2   Health topics covered

Different topics are covered. That is, stories on prevention, treatment, drug resistance, new infections, counterfeit medicines, side effects of medicines, HIV/AIDS, malaria, tuberculosis, nutrition, polio, vaccination, breast cancer, and reproductive and child health. However, in terms of ranking of coverage of health topics, HIV/AIDS is number 1 followed by malaria and tuberculosis. Other health topics pertain to drug donations and drug shortages mainly in the public health institutions. *The National Mirror* has a deliberate policy of writing feature stories on various topics including health.

"*The National Mirror* is an issue-based publication. This is because we are a weekly paper. We prefer developing news ideas into feature stories in which topics on different subjects are discussed in details. It is for this reason that we do not use a lot of stories from Zambia News Agency [ZANA] or Zambia Information Services [ZIS]," said *National Mirror*.

3.3   Sources of health stories

The main sources of local health stories include MOH, CBoH, hospitals, and clinics. Others are National AIDS Council (NAC), nongovernmental organizations (NGOs), medical experts, patients, association of traditional healers (nga'angas), Network of People Living with HIV/AIDS, and WHO. Foreign sources include the British Broadcasting Corporation (BBC), Reuters, and the Internet. Health information from MOH and CBoH is most reliable while BBC and Reuters are the most credible foreign sources.

The MOH is found to be more reliable because, apart from being the authority on health matters in the country, it employs medical experts. The media find WHO reliable because it is a global authority on the subject and that its information is based on research. BBC and Reuters are credible because they have a reputation of quoting or interviewing credible sources.

Interviews, media queries, health journals, and newsletters are some of the ways in which the media get information on health topics. However, when a health story is of a life-threatening nature, such as a cholera pandemic, reporters are assigned to go and 'get' these stories from members of communities in the townships.

3.4   Constraints in getting health stories

The media houses surveyed are experiencing a number of challenges in as far as news coverage is concerned. The common problems include inadequate reporters, transport, computers, and cameras. The consultant was told that reporters share transport and have to queue up in order to file their reports due to limited computers in the newsroom. However, this problem is more pronounced in the public media houses.

"We may want to provide media coverage on health stories but it is difficult due to limited resources. For example, with one television camera, it is hard to cover different stories, some of which happen at the same time. In such a situation, the only camera is spared for hard news involving senior government officials. This is somehow killing reporters' initiative to do other stories," said ZNBC.

Apart from the logistical problems already indicated above, bureaucracy is yet another common problem, and almost all media houses surveyed mentioned it. The current arrangement whereby only the official institutional spokesperson is allowed to speak and comment on health stories is reported to be causing problems to reporters wanting to provide media coverage on health-related topics.

"I think that the government should give leeway to the staff at the clinics to make a comment on a story. This is especially true when a story is about an issue within the catchment area of the health center. The reason is that the staff at the clinic is better placed to provide a sound and contextual comment on such a story," said ZDM.

However, it was pointed out that the media are not facing problems in getting health information from government health institutions such as hospitals, which have employed public relations officers. Because of this, the journalists think that it is a good thing that the MOH employs public relations officers to facilitate media coverage of health information.

Expert comment on a story is very important in journalism. This is because it is a professional requirement. A story without experts' comments has no credibility and authenticity. One editor narrated how she had to abandon a health story after trying in vain to get comments from the relevant health officials.

"I wanted to do a feature article on antiretroviral [ARVs] but I had to abandon it because health officials could not respond to my press query. Since we operate on the basis of deadlines, it was difficult for me to go ahead with that idea. Despite these difficulties, we are trying our best to use other means of going round the problem," said ZDM.

Some news editors interviewed suggested that journalists should initiate the formation of a 'media health watch group'. They said through such a group, the media would be in a position to 'persuade' health experts to quickly attend to press queries on drug resistance. Further, the media health watch group would provide a platform for the media personnel to share information on drug resistance and other health-related topics.

3.5   How the public finds out about health information

When asked how the public finds out about health information on different topics, including new medicines for malaria, medical treatment for pneumonia, and HIV/AIDS drug treatment, both the electronic and print media were mentioned as sources of public information on the above topics.

On the issue of which media channel has the most impact with government decision-makers or the business community, some news editors said the print media has the most impact while others said the electronic media. To show that electronic media, television in particular, has the most impact on government decision-makers and the business community, the following was narrated:

"The government closed Soweto market [biggest in the country], after the television crew showed pictures of the deplorable sanitary conditions that were prevailing at the market. The following day, the business community was very uncooperative to us, saying, '*ndi amene anavalisa market awa,*'" said ZNBC. (Nyanja [Cewa] language, meaning 'these are the ones who made the market to be closed.')

"Television has the most impact on the government decision-makers. When there are no television cameras, they would rather postpone an event or meeting than to go ahead without television. Government decision-makers like seeing themselves on television," said The Post.

However, in terms of reach and impact with the ordinary people, radio is the most effective media channel. Hence, it is suggested that health messages affecting people in the urban and rural areas need to be sent out through the radio, newspapers, television, and word of mouth in that order.

It was also pointed out that church orientated community-based organizations, (CBOs), should be involved in disseminating information on health issues. The editors said CBOs have remarkable outreach capabilities to access the nontraditional audiences in the suburbs and villages. However, CBOs need to be educated first in such health topics as drug resistance.

3.6   Journalists' general awareness on health topics

In order to assess the journalists' general awareness on a number of health-related topics, the editors who were interviewed during the survey were asked to indicate if they had seen, heard, or covered any of the topics listed below in their respective newspapers, radio, or television programs—

- Quality of medicine or counterfeit medicine
- Safety or side effects of medicines
- Availability and affordability of medicines in Zambia
- New medicines available for treatment of illnesses
- Need to finish the full course of medical treatment
- Drug resistance

All the editors interviewed had seen or heard reports on the above health topics. Half of them had written articles on the same topics. The most popular sources for such topics are MOH, CBoH, hospitals, and clinics. Few mentioned Internet, radio, television, newspapers, workshops, conferences, and friends. However, reports on drug resistance were in relation to malaria.

"I have heard and written stories about drug resistance in relation to malaria. At least there was an effort to inform the people about the change in the malaria treatment. Both MOH and malaria patients admitted through the media that chloroquine was no longer effective in treating malaria and that a new drug was available to that effect," said TZ.

3.7   Is it important that the public get information on drug-related topics?

Answering the above question, the majority of the editors interviewed during the survey said that it is very important that members of the public are made aware about information on drug-related topics because these are issues of life and death. One of the editors put it this way:

"Health is wealth. Hence, it is extremely important that drug-related topics receive prominent media coverage. People need to know about drug-related topics but not about politicians insulting each other. Unfortunately, stories on the later are the ones dominating media coverage."

To make sure that as many people as possible get information on drug-related topics, some editors interviewed said the government should consider strengthening the publication of the local-language newspapers by ZIS. This is important because some people, especially in the rural areas, do not understand the English language.

3.8   Drug resistance

The journalists interviewed said drug resistance is already a big problem in Zambia, but it appears not to be a problem because there is no information coming through the media warning the people of its consequences. Death is said to be the ultimate consequence of drug resistance. Self-prescription of medicines, failure to follow the dosages, lack of information on drug-resistance, and general illiteracy among the people are some of the causes that the editors mentioned.

It is for the above reasons that editors said that if they had access to reliable information on drug-related topics, they were ready to disseminate 40–50% of such stories. Other than the universal news determinants, impact, relevance, and topicality of such health topics are the main criteria for disseminating information on drug-related topics.

3.9   Health column

Health experts and organizations are free to arrange to have a health column or radio or television program. Health experts interested in having a health column can discuss details with the media houses. However, one has to make a serious commitment of being consistent in writing such stories. This is because the editorial space and airtime for that purpose will be reserved permanently.

"The problem we have had in the past is that health experts do not manage to consistently supply us with health stories for the health column. This situation causes a lot of inconveniences to the readers and pressure to the newspaper because we have to look for somebody else to continue writing for the column," said TZ.

The health columns are good especially when the messages are packaged in a user friendly way, without jargon. Such columns in general do increase the newspapers' sales because some readers buy newspapers in order to read what is written in the column. However, it is not all readers that read health columns because they (columns) are perceived as 'adverts' or propaganda.

3.10   Training of journalists

Training of the media personnel was one issue that came up prominently. They said reporters had attended workshops on economic, political, and parliamentary reporting but nothing on health reporting. They explained that empowering the reporter with the knowledge makes him or her appreciate different angles of a story and, most of all, it is an incentive to the reporters.

"The health experts should make an effort to give the intellectual capital on issues of drug resistance. The medical officers take a minimum of seven years to learn the craft. Hence, they need to orient us with the basics. The orientation can be in the form of workshops. Otherwise, it is unfair to expect us to write good health stories," said *The Zambian Farmer Magazine*.

4.0   Summary of

Knowledge and perspectives on drug resistance and related issues

- Of all the editors interviewed, only one had heard the term 'antimicrobial resistance'. He heard the term from an international conference. However, he could not explain what the term means to someone who had not heard it before.

- All editors interviewed have heard of the term 'drug resistance', but in relation to malaria. They can explain what the term 'drug resistance' means to someone who has not heard about it before.

- The editors interviewed said drug resistance is a big problem in Zambia. However, because of a lack of media coverage as result of not having information, mainly from health experts on the subject, it (drug resistance) appears not to be a big problem.

- Death was said to be the ultimate consequence of drug resistance while self-prescription and failure to finish the full course of medical treatment are said to be some of the causes of drug resistance.

Decision makers

- Editors determine stories to be published or broadcast. However, reporters have the leeway to cover other stories as long as such stories meet the editorial policy of their respective media houses.

Information sources for health stories

- Locally, the MOH, CBoH, hospitals, and clinics are the main sources of health topics often reported in the media; others include WHO, Internet, BBC, and Reuters.

- The most reliable and credible sources of health information to the media include MOH, WHO, BBC, and Reuters. The first two because they have health experts and are involved in health research, while the last two are credible because they quote reputable and credible sources in their stories.

Health topics currently covered by the media

- HIV/AIDS is by far the most covered health topic, followed by malaria and tuberculosis in that order.

- Stories about drug donations and drug shortages in the public health institutions and quality of medicines or counterfeit medicines also feature prominently in the media.

Communication channels for health information

- Radio, newspapers, television, and word of mouth are ways through which the public learn of such health topics as the new medicines for malaria, medical treatment for pneumonia, and HIV/AIDS treatment.

- The print media in general is said to be the most credible, not only on health and medicine issues, but on other issues as well due to its durability and referral advantage.

- Television has the most impact to both government decision-makers and the business community because they 'like seeing themselves on television'.

- The editors suggested that CBOs be involved in disseminating information on health issues due to their remarkable outreach capabilities to access nontraditional audiences in suburbs and villages.

Barriers to coverage of drug resistance and related topics

- Limited resources: inadequate number of reporters, transport, computers, and cameras

- Bureaucracy: only official spokespersons are allowed to speak or comment on health stories

- Difficulties in securing expert comments on health information

- None of the media houses covered had health reporters

- Percentage of coverage of health and medicine related data, in terms of time, stories, and programs, could not be estimated because health articles are covered on the basis of the universal news criteria.

Editors' suggestions for facilitating coverage of drug resistance

- Increased access to reliable information: Given access to reliable information on drug-related topics, the editors said they would readily disseminate the material information using their respective media channels.

- Build relationships: The stakeholders should be encouraged to identify and establish contacts with media reporters who have shown interest in reporting health and drug-resistance topics. Hence, the need to exchange telephone and e-mail addresses with such reporters where they can send health information for publication or broadcasting.

- Contribute to health columns: The editors said health experts and organizations are free to arrange to have a health column or radio or television program. Health experts interested in having health columns can discuss details with the media houses. However, one has to make a serious commitment of being consistent in writing such stories. This is because the editorial space or airtime for that purpose will be reserved permanently.

- Provide user-friendly context: The health columns are good especially when the messages are packaged in a user friendly way, without jargon. Such columns in general do increase the newspapers' sales because some readers buy newspapers in order to read what is written in the column.

- Provide logistical assistance: Provide transport to journalists for them to provide media coverage on drug-related issues.

- Sponsor training: Empower the media personnel with the necessary background information and key concepts about drug resistance.

- Facilitate access: Facilitate access to health facilities that do not have public relations officers.

- Enhance professional support: The editors suggested the formation of a media health watch group to enhance their ability to access information due to increased legitimacy and opportunities for information exchange.

5.0   Recommendations: Media Advocacy Approaches for Increasing Awareness of Drug Resistance in Zambia

Drug resistance terminology

- It is recommended that stakeholders consider using the term 'drug resistance' instead of 'antimicrobial resistance'. This is because the term 'antimicrobial resistance' appeared to be both difficult and intimidating, judging from the editors' reaction to it.

Buildings relationships with the media

- As a starting point, it is recommended that a copy of this report be given to each of the media houses surveyed. This will jump-start the coalition building process with the media.

Increasing access to information

- The MOH should consider employing public relations officers in its institutions to facilitate the dissemination of health information to the public. This recommendation is made in light of the media admission that they have no problems in accessing health information in the institutions where there are public relations officers.

Capacity building

- It is recommended that stakeholders consider sponsoring a workshop with media personnel especially at the news editor level before commencement of antimicrobial and drug resistance activities. This strategy will help to empower the media with the necessary background information and key concepts regarding drug resistance.

- Due to their remarkable outreach capabilities, it is recommended that CBOs be involved in disseminating information on drug resistance. However, CBOs will need to be technically oriented prior to their participation.

- Drama is one of the effective ways of passing the messages to the public because it communicates while entertaining the people. It is, therefore, recommended that this strategy is considered at both planning and implementation points.

- The MOH should strengthen its inspectorate wing in order to clamp down on illegal drug stores in the townships and street corners. The legal drug dealers should be educated on the consequences of drug resistance to individuals and the nation at large.

Expanding future media surveys

- It is recommended that church-oriented CBOs are involved in disseminating information on drug resistance. This is because CBOs have remarkable outreach capabilities to cover nontraditional audiences. However, CBOs will need to be technically oriented prior to their participation.

- It is recommended that the next time a similar survey is undertaken, reporters should be included in order to have a balanced picture of the situation. This is important because reporters are on the ground.

- Although ZNBC is the only radio and television network with national coverage, it is recommended that community radio stations are included during similar surveys in the future. This is in order to know what criteria they use to pass or reject health stories.

- Though the print media surveyed have wider coverage, it is recommended that community newspapers are included in future surveys. This will provide a broader view of the situation and thus help implementers to develop appropriate intervention strategies.

6.0   Conclusion

- It is not easy for me to write an integrated conclusion. However, I wish to conclude by requesting that stakeholders consider implementing some or all of the recommendations, which affect them.

- It is established that the media in Zambian are not only aware that drug resistance is a big problem, but also ready to contribute in the sensitization effort by providing media coverage on drug resistance.

- Several barriers to covering health issues by the media were identified as well as feasible solutions for addressing them.

- The reach and impact of the media and other communication channels vary. Advocacy and communication strategies will need to consider which channel is best suited for the message they want to deliver and the audience they want to reach. For example, television is said to have the most impact on government decision-makers and the business community. The newspapers have more impact on the general public because of their durability and referral advantage. In terms of reach, radio has the greater reach.

Appendix A. Interview Guidelines

We are interested in speaking with media people who deal with health and medical issues to get some idea of their **needs, sources, and issues.** Information from these interviews will help to **develop advocacy and communication strategies to generate more interest in particular health and medical issues.**

1. Tell me a little about what you do.

   a. Describe your paper/article (or radio/TV station/program), etc.

b. How much work related to health and medicine do you do (what % of time, articles/ programs are related to health/medicine)?

c. What are the main health topics that you cover?

d. Please describe the main target audience of your health/medical-related work (public, decision makers, urban, etc.)

e. Any idea of reach of your column/program in Lusaka (or relevant local area)?

f. What about country wide?

2. What makes a health topic newsworthy?
    (Probe: information source, topic, etc).

3. Where do you get your information on health/medical topics that you report on? What other sources? Any others?

4. **IF NO ZAMBIAN SOURCES INCLUDED ABOVE, ASK QUESTION:** Which are your most reliable Zambian sources for health/medical information? What others? (LIST FIRST 3 RESPONSES)

5. Which are your most reliable Zambian sources for health/medical information? What others? (LIST FIRST 3 RESPONSES)

6. Why do you consider these sources to be the most credible/reliable?

7. In your view, how does **the public** find out about certain topics - that is, their sources of information?

8. How do you think **the public** finds out about (READ ONE LINE FROM LEFT COLUMN OF TABLE BELOW) _____? *Record response and ask*:

    From what other sources might the public learn of this topic? [RECORD FIRST 3 RESPONSES IN TABLE BELOW-Source 1, Source 2, etc. REPEAT ABOVE QUESTIONS FOR NEXT TOPIC]

	Source 1	**Source 2**	**Source 3**
a. The new medicines for malaria?			
b. Medical treatment for pneumonia?			
c. HIV/AIDS drug treatment?			

9. What particular media do you find have the most credibility on health/medical issues with the public? Could you please specify **names of papers, columnists, radio stations, announcers, programs, journalists, etc.**

10. What particular media do you think have the most impact with government decision-makers? Could you please specify **names of papers, columnists, radio stations, announcers, programs, journalists, etc.**

11. What *particular media do you think have the most impact* with decision makers in the business community? Could you please specify **names of papers, columnists, radio stations, announcers, programs, journalists, etc.**

12. Could you please tell me if you remember having seen or heard any media reports about .... in the last year?

    MARK 'Y' FOR EACH SEEN/HEARD IN FIRST BLANK COLUMN, THEN ASK

    a. Can you remember where you saw or heard reports on this topic? [MARK ANSWERS IN SECOND COLUMN. CHECK RIGHTMOST COLUMN IF THEY SAY THEY/THEIR ORGANIZATION DID IT. THEN ASK ABOUT NEXT TOPIC]

Topic	Yes/No	Where did you see or hear the report?	I/we did an article or program on it
Quality of medicine or counterfeit medicines			
Safety or side effects of medicines			
Availability and affordability of medicines in Zambia			
New medicines available for treatment of illnesses			
Need to finish the full course of medical treatment			
Drug resistance			

13. How important do you think it is that **the public** gets information on these drug-related topics?

    a) Very important
    b) Not important
    c) More important than other issues
    d) Less important than other issues
    e) I don't know

14. Are there other health/medical issues that are more important than the ones mentioned above?

     a. Yes   b. No

15. What makes them more important? (I have given it a separate # in order that it is not overshadowed or missed out)

16. Do you have access to reliable information on drug related topics? **(If no, skip question 17)**

     a. Yes   b. No

17. How likely would you/your organization be to disseminate reliable information on drug-related topics?

     ………… Very likely
     ………… Not very likely
     ………… Not at all
     ………… I don't know

18. What would make it more likely for you/your organization to disseminate information on drug-related topics?

19. What kind of specific information would you most need on the <u>above </u>topics to be able to use it in your regular channels?

20. Have you heard the term 'drug resistance'? **(If no, skip question 21)**

     a. Yes   b. No

21. In what context have you heard the term 'drug resistance'?

22. Would you explain what the term 'drug resistance' means to someone who has never heard it? **(If no, skip question 23)**

     a. Yes   b. No

23. How would you explain what the term 'drug resistance' means to someone who hadn't heard it?

24. Have you heard the term 'antimicrobial resistance'? **(If no, skip question 25)**

     a. Yes   b. No

25. In what context have you heard the term 'antimicrobial resistance'?

26. Would you explain what the term 'antimicrobial resistance' means to someone who has never heard it?

    a. Yes   b. No

27. How would you explain what the term 'antimicrobial resistance' means?

28. In your view, is drug resistance a problem in Zambia?

    a. Yes   b. No

29. Do you know some of the consequences of drug resistance? (**If no, skip question 30**)

    a. Yes   b. No

30. What are some of the consequences of drug resistance?

31. Do you know the main causes of drug resistance? (**If no, end interview**)

    a. Yes   b. No

32. What are the main causes of drug resistance?

Thanks for your help

Appendix B. Journalists Interviewed During the Survey in Lusaka, Zambia

Media houses	Journalist interviewed	Official title
Times of Zambia	Chris Mfula Frank Katope	Chief Reporter Features Editor
Zambia Daily Mail	Pauline Banda Evans Milimo	Gender Editor News Editor
The Post	Edem Djokotoe	Training Editor
The Farmer Magazine	Chiza Mwale	Managing Editor
National Mirror	Boyd Phiri Moses Chitendwe	Sub-Editor News Editor
Zambia National Broadcasting Corporation	Grevazio Zulu Kaunda Mwape	Assistant Assignment Editor Sub-Editor, radio/television local and English news

ANNEX 4. DRAFT CALL FOR ACTION

Preserving the Effectiveness of Drugs: A Call for Action

The AWG for antimicrobial drug resistance, working in close collaboration with the CBoH, calls all those concerned with health and the well being of Zambia to come together and address the problem of failing effectiveness of drugs.

More than 4 million Zambians were reported by CBoH to have suffered from malaria in 2003. Over 2 million of these cases would not have recovered sufficiently if they were treated with chloroquine, the drug of choice for treating malaria over the last 4 decades. TB, which affects more than 50,000 Zambians, requires a combination of antibiotics to achieve successful treatment outcomes. In this era of the HIV/AIDs pandemic, if nothing is done, treatment failure with antiretroviral drugs (ARVs) due to drug resistance is imminent.

Resistance to antimicrobial drugs, a global threat, presents a growing peril for Zambia and requires urgent action by every Zambian.

It is gratifying to note that some significant developments to combat drug resistance have been initiated. In 2003, MOH introduced an artemesinin-based combination therapy (ACT) (Coartem) to replace the failing chloroquine. Apart from that, treatment for sexually transmitted infections (STIs) and cholera has had to change over time because of drug resistance to the common drugs including penicillin and tetracycline.

Replacing ineffective drugs is an important and necessary strategy for improving drug effectiveness. Because treatment options are limited, it is critical that we also preserve the effectiveness of existing drugs. While the action being taken is commendable and indeed desirable, evidence available indicates that the problem of drug resistance in Zambia is still growing. Parasite resistance to sulphadoxine–pyrimethamine (commonly known as Fansidar), one of the drugs currently used for treating malaria, has now reached unacceptable levels in some parts of Zambia. A similar trend has been observed in TB where multi-drug resistance (MDR) is reported to be developing. In addition, evidence exists indicating treatment failure with drugs used in pneumonia, typhoid, and dysentery.

When drugs are no longer effective, people remain sick for longer periods of time, treatment costs increase, and more people die from otherwise curable diseases. Preserving the effectiveness of antimicrobial drugs should therefore be an immediate concern for all.

The use of antimicrobials is widespread in Zambia. Resistance to these drugs often develops as a result of bad prescribing and dispensing practices, inappropriate treatment seeking behavior, and poor drug quality. Evidence exists in Zambia showing irrational prescribing and dispensing of

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The Call for Action is based on findings of a rapid appraisal conducted for the AWG. Detailed findings may be obtained through the AWG Secretariat.

antibiotics in viral infections, diarrhea, and malaria in inappropriate doses and duration. Many Zambians treat themselves and obtain their medicines from unauthorized sources for many conditions. In many instances, this promotes development of resistance to drugs. Although there is limited evidence to demonstrate poor quality, it is known that some of the drugs available for use in Zambia do not meet the minimum standards stipulated by the Pharmacy and Poisons Board.

Preserving drug effectiveness requires different actions from different stakeholders including the Government of the Republic of Zambia, media communications, cooperating partners, health professionals, and consumers. This Call for Action draws attention to actions that should be taken to preserve the effectiveness of existing drugs—

- Incorrect prescribing and dispensing of antimicrobials is often due to diagnostic limitations and unavailability of recommended drugs.

- Standard treatment guidelines (STGs), formulary management, and Drugs and Therapeutics Committees (DTCs) are useful tools for promoting rational prescribing. These interventions have been introduced in Zambia. However, further action is needed to improve on their usefulness. In this regard, there is need to—

  o Evaluate the performance of existing DTCs and reduce barriers to their effective performance (Action: MoH/CBoH).

  o Develop and implement a dissemination plan for STGs and Essential Drugs Lists in the public and the private sectors (Action: MoH/CBoH).

  o Ensure that health workers at all levels are trained (pre-service and in-service) on the use of STGs, Essential Medicines List, and AMR (Action: University of Zambia, Chainama College of Health Sciences, General Nursing Council, Medical Council of Zambia, Evelyn Hone College and other training institutions for health workers).

  o Strengthen the drug supply systems to ensure regular supply of good quality, essential drugs, including development of a long-term financial sustainability plan (Action: MoH/CBoH, CHAZ and other healthcare providers).

- Self-medication for some common problems is sometimes taken inappropriately. Some of the reasons include lack of knowledge, convenience, and cost. It is very likely that, as a result, people are taking the wrong drugs, including antimicrobials, in incorrect doses and for wrong durations. To preserve the effectiveness of these drugs it is necessary to—

  o Educate the public about the risk of developing resistance due to inappropriate drug use through media campaigns, school activities, and other CBO activities (Action: MoH/CBoH, Ministry of Education, media communications, Consumer Association of Zambia, health professional bodies, and all health workers).

- o Encourage patients to adhere to prescribed and dispensed medicines (Action: Consumer Association of Zambia, media communications, caregivers, and all health workers).

- o Encourage drug vendors to adhere to regulations (Action: MoH/CBoH, Pharmacy and Poisons Board, and health professional bodies).

- Poor-quality drugs impact on treatment effectiveness and development of resistance. Because the drug quality control systems in Zambia currently require improvement, there are opportunities for poor-quality drugs to be used. To prevent development of antimicrobial resistance due to poor-quality drugs, the following needs to be done—

  - o Establish a National Drug Quality Control Laboratory without delay (Action: MoH and Pharmacy and Poisons Board and Cooperating Partners).

  - o Establish a pharmacovigilance system (Action: MoH, Pharmacy and Poisons Board and all health institutions).

  - o Educate the public about the risks associated with poor-quality drugs (Action: Pharmacy and Poisons Board, media communications, Pharmaceutical Society of Zambia, and other health regulatory and professional bodies).

- Preserving drug effectiveness requires effective surveillance strategies and mechanisms to facilitate the collection and management of information for appropriate action. The following needs to be done—

  - o Collect information on drug resistance and make it available to the body designated to spearhead the implementation of AMR containment strategies (Action: all institutions providing health care services).

  - o To be vigilant and report cases where patients do not respond to treatment as expected, especially for such diseases such as TB, malaria, and HIV/AIDS (Action: all health workers and patients).

  - o Develop good network and feedback systems in order to enhance the use of information on drug resistance (Action: institutions such as TDRC, CDL, virology and microbiology laboratories, NMCC, and all health institutions).

  - o Strengthen the existing laboratories' capacities to support diagnosis and conduct surveillance and improve internal and external supervisory capacity of reference laboratories (Action: MoH/CBoH).

  - o Include the private sector in the dissemination of information and materials. For example, SOPs and capacity-building activities for laboratories, including quality control, should be availed to the private sector (Action: MoH/CBoH and private sector).

ANNEX 5. REQUEST FOR COUNTRY CLEARANCE (RFCC)

SUBJECT: GH/HIDN/HS: requests travel concurrence to Zambia under the AED/Change Project (HRN-A-00-98-00044-00), MSH/RPM Plus Program (HRN-A-00-00-00016-00).

Text:

Academy for Educational Development (AED) requests concurrence for travel by:

- Nancy Pollock, Senior Project Officer, to Zambia, arriving on/about August 1, 2004, and departing on/about August 20, 2004.
- Mohan Joshi, Project Manager for Antimicrobial Resistance, RPM Plus Program, arriving on or about August 17, 2004 and departing on/about August 25.
- Maria Miralles, Deputy Director of the RPM Plus Program, arriving on or about August 17, 2004 and departing on/about August 25.

2. Nancy Pollock, Maria Miralles, and Mohan Joshi do not have USAID security clearance.

3. Purpose of travel is to provide technical assistance to further the implementation of the approach to build support for containing antimicrobial resistance (AMR). Ms. Pollock and Dr. Joshi will help Oliver Hazemba, Regional Technical Advisor, MSH, and Caesar Mudondo, Consultant, prepare for an upcoming retreat (tentatively scheduled for August 20-21) with members of the AMR Containment Advocacy Working Group (AWG). Dr. Kama Garrison, the newly hired Pharmaceutical Managemnt Advisor, USAID, may accompany the team.

Ms. Pollock will:

- Assist Mr. Mudondo and Mr. Hazemba in identifying and hiring additional consultants to carry out specific portions of the situation analysis tasks.
- Help them finalize the summaries of situation analysis data collected to date, which will be distributed to members of the AWG on August 9.
- Work with them and members of the AWG to develop an advocacy plan.

Ms. Pollock and Dr. Joshi will:

- Help Drs. Mudondo and Hazemba Prepare for the retreat (plan an agenda, develop TOR for working sessions, etc.) and assist them and AWG members in developing presentations.

Ms. Miralles and Dr. Joshi will:

- Attend the retreat to observe the process and be available to address issues/questions/ concerns that may arise. Ms. Pollock may also attend the retreat. Following the retreat, Ms. Miralles and Dr. Joshi will help Mr. Mudondo and Mr. Hazemba develop plans for a stakeholder meeting.

4. Anticipated contacts in-country include USAID/Zambia, Oliver Hazemba (MSH/RPM Plus), Caesar Mudondo (Change Consultant), and members of the Advocacy Working Group. Members of the group may also meet with potential consultants and key stakeholder groups. Contacts are aware of this proposed travel and have agreed to be available.

5. Travel is being funded by GH.

6. No mission support is requested.

7. Nancy Pollock will contact mission on arrival to arrange briefing and/or debriefing, depending on availability of mission staff.

8. We appreciate mission assistance in this matter. Please advise mission comments, concurrence to Nancy Pollock, (202) 88-8587, change, npollock@aed.org . Thank you for your attention to this request.

Photo of the Advocacy Working Group (AWG) members and the US team during the retreat held at Hotel Protea in Lusaka on August 20 and 21, 2004.